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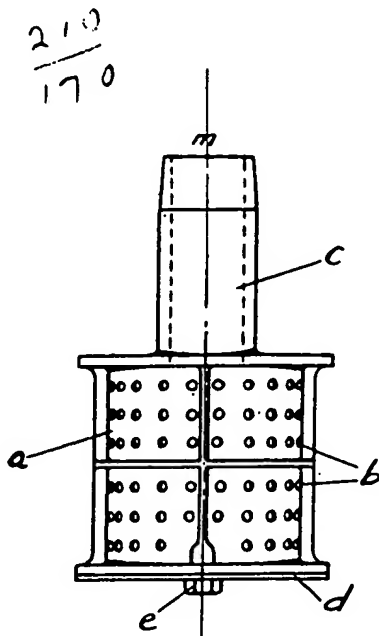


Fig. 1.

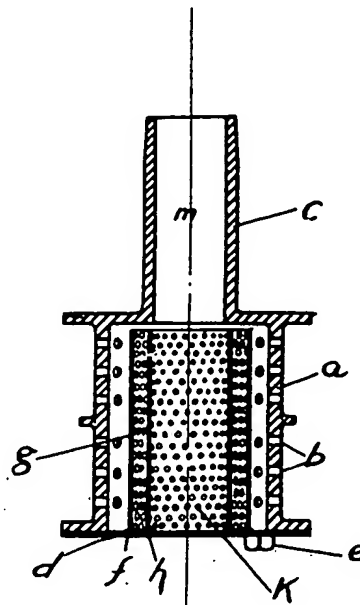


Fig. 2.

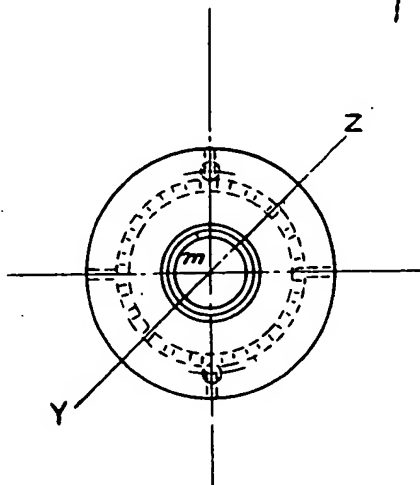


Fig. 3.

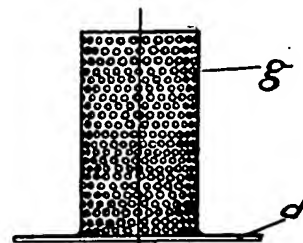


Fig. 4.

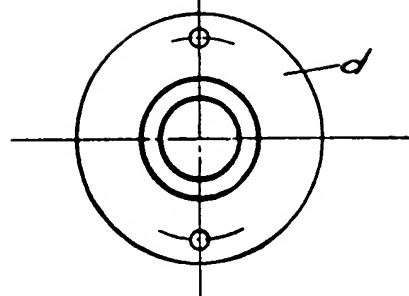


Fig. 5.

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56/2

# PATENT SPECIFICATION



Application Date: Aug. 10. 1923. No. 20,373/23.

219,188

Complete Left: May 3, 1924.

Complete Accepted: July 24, 1924.

## PROVISIONAL SPECIFICATION.

### Improvements in Strainers for Water Feed-pipes.

I, WILLIAM JOHN ROSSON, a British subject, of 19, Clifton Road, Elworth, Sandbach, Cheshire, do hereby declare the nature of this invention to be as follows:—

This invention refers to strainers for water feed-pipes and particularly to a strainer for attachment to the end of the suction hosepipe of a steam wagon, fire engine or the like, which, in feeding the feed water tank thereof, is adapted to be placed in a river, stream, pond or the like under the water surface.

With existing arrangements, where there is no straining medium except the gauze of the filter box, which latter in the case of a steam wagon is situated between the feed water tank and the boiler, there is a danger of foreign matter being lifted into the tank and clogging the said filter box, and, if the gauze of the latter be somewhat damaged, a danger of the sediment or foreign matter gaining access to the boiler feed pump or injector and causing such parts to stop working effectively.

The present invention provides a filter or strainer by the use of which foreign matter is prevented from being drawn into the feed water tank, and which is so constructed that clogging is practically impossible.

The strainer according to my invention comprises a cylindrical outer casing whose upper end is formed a projecting neck, which latter is adapted to take into

the bore of the end of the suction hose-pipe. Said cylinder is closed at the bottom by a hinged or detachable lid, and is constructed of perforated sheet metal.

Within the outer casing are concentrically arranged one within the other, a plurality of cylinders, conveniently three. All of said cylinders are perforated, the outer one having perforations smaller than those of the outer casing, the perforations of the consecutive cylinders approaching the middle then being respectively smaller, the centre one being preferably of wire gauze.

The inner cylinders may be connected to one another, and in the case of a detachable lid, may be fixedly or detachably secured to the latter. The centre gauze cylinder may, however, be secured, or a tight fit into the neck, depending into the device.

Access may be obtained to the inner cylinders for cleaning purposes by opening the lid.

If the outer casing tapers somewhat towards the neck, and the inner cylinders contact therewith, separate fixing means for the latter may be dispensed with.

Dated the 8th day of August, 1923.

KINGS PATENT AGENCY LIMITED,  
By BENJ. T. KING,  
Director,  
Registered Patent Agent,  
146A, Queen Victoria Street, London,  
E.C. 4,  
Agents for Applicant.

## COMPLETE SPECIFICATION.

### Improvements in Strainers for Water Feed-pipes.

I, WILLIAM JOHN ROSSON, a British subject, of 19, Clifton Road, Elworth,  
[Price 1/-]

Sandbach, Cheshire, do hereby declare the nature of this invention and in what

manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention refers to strainers for water feed-pipes and particularly to a strainer for attachment to the end of the suction hosepipe of a steam wagon, fire-engine, or the like, which in feeding the feed water tank thereof, is adapted to be placed in a river, stream, pond or the like under the water surface.

With existing arrangements where there is no straining medium except the gauze of the filter box which in the case of a steam-wagon is conveniently placed between the feed water tank and the boiler, there is a danger of foreign matter being lifted into the tank, and if the gauze of the latter should become damaged, a danger of the foreign matter or sediment gaining access to the boiler feed pump or injector and preventing these parts from working effectively.

Furthermore if solid matter gains access to the feed water tank there is a possibility of it dissolving and in this case no filtering arrangement can prevent the dissolved matter passing into the boiler where it may form a scale detrimental to the boiler plates and tubes.

The present invention provides a strainer or filter whereby foreign matter is prevented from being drawn into the tank in the case of a steam-wagon or into the pump in the case of the fire-engine, or into the working parts of like appliances and the strainer is so constructed that clogging is practically impossible.

The strainer according to my invention comprises a cylindrical or any conveniently shaped outer casing on the upper end of which is formed a neck the purpose of which is to fit into the end of the suction hosepipe. The aforementioned outer casing is closed at one end by a lid conveniently and securely fastened when in use and on this lid are concentrically arranged a plurality of perforated cylinders the perforations in which are smaller as they approach the central one.

In order that the said invention may be more easily understood and readily carried into effect it is now more particularly described with reference to the accompanying drawings.

Fig. 1 shows the elevation of the strainer.

Fig. 2 is a sectional elevation of the outer casing on line Y—Z and also of the perforated portions or cylinders.

Fig. 3 shows the plan thereof looking at the top.

Fig. 4 shows an elevation of the perforated portions or cylinders as detached from the outer casing.

Fig. 5 is a plan of the same.

*a* is the outer casing forming the main portion of the strainer. *b* are the holes in the said outer casing. *c* is the neck which fits into the hosepipe. *d* is the lid of the strainer which is attached to the outer casing *a*, by the set pins *e*, or some other method. *f* is a perforated portion or cylinder with holes *g*, graduated smaller than the holes *b*, in the outer casing *a*, and *h* is another perforated portion or cylinder arranged within the perforated cylinder *f*, and with holes *k*, still smaller than the holes *g*, in the said perforated cylinder *f*. These portions or cylinders may be increased in number if necessary. *m* is the outlet from the strainer into the hosepipe.

The perforated portions or cylinders *f* and *h* are securely fastened to the lid *d*, and by unscrewing the set pins *e*, and detaching same, the whole arrangement may be readily cleaned out. It will be seen that by the graduated perforated portions or cylinders any foreign matter which may get through the holes in the outer casing is stopped or trapped by the smaller holes in the inner cylinders and is prevented from getting into the tank or other receptacle and thus a practically clear stream of water is ensured.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In strainers of the kind hereinbefore described the provision of a plurality of graduated perforated portions or cylinders within the strainer, substantially as described with reference to the accompanying drawings.

2. In strainers of the kind illustrated and described the combination of the said graduated perforated portions or cylinders with the outer casing of the strainer.

3. A strainer having its parts constructed, arranged and adapted to operate as set forth, so that by its construction foreign matter is prevented from entering into the tanks, pumps or receptacles where it is employed, as hereinbefore described with reference to the accompanying drawings.

Dated the 2nd day of May, 1924.

WILLIAM JOHN ROSSON.